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THE BEES OF THE GENUS *SPHECODES* LATREILLE (HYMENOPTERA: HALICTIDAE) OF THE EUROPEAN PART OF RUSSIA

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Twenty-eight species of the bee genus *Sphecodes* Latreille are recorded from the European part of Russia including Crimea, North Caucasus, and Ural. *S. majalis* Pérez, 1903 and *S. nomoidis* Pesenko, 1979 were found in Russia for the first time. *S. marginatus* Hagens, 1882 and *S. zangherii* Noskiewicz, 1931 were erroneously recorded from Russia and are removed from the list of Russian species. The distribution of other species is enlarged. The number of *Sphecodes* species in the fauna of Russia increased up to 35.

KEY WORDS. Apoidea, Apiformes, Palaearctic region, biodiversity, new records.

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Приводится список 28 видов пчел рода *Sphecodes* Latreille из европейской части России (включая Крым, Северный Кавказ и Урал). *S. majalis* Pérez, 1903 и *S. nomoidis* Pesenko, 1979 впервые указываются для фауны России. *S. marginatus* Hagens, 1882 и *S. zangherii* Noskiewicz, 1931, ошибочно указанные ранее,

исключены из списка фауны России. Дополнены данные по распространению остальных видов. Число видов *Sphecodes* в фауне России возросло до 35.

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INTRODUCTION

This paper continues our study of the *Sphecodes* Latreille bees of Russia that started in 2014 with the fauna of the Asian part of Russia (Astafurova & Proshchalykin, 2014, 2015b). The goal of the present paper is to review the *Sphecodes* fauna of the European part of the country including Crimea, North Caucasus, and Ural (Fig. 1).

Russia stretches over a vast expanse of Eurasia between the Baltic Sea in the west and the Pacific Ocean in the East. The European part of Russia comprises 57 administrative units covering about 4.3 million km² (about 25% of the total area of Russia) (Fig. 1). In the east, the European part of Russia is delimited by the Ural Mountains and in the south it is defined by the border with Kazakhstan.

Dichroa fuscipennis Germar [=*Sphecodes albilabris* (Fabricius)], *D. analis* Illiger [=*S. rufiventris* (Panzer)], *D. monicornis* Illiger [=*S. gibbus* (Linnaeus)], and *D. geofrella* Illiger [sic!] [=*S. crassus* Thomson] were the first four species of the genus to be recorded from the European part of Russia (Orenburg Province, Saratov Province, Ul'yanovsk Province and Tatarstan Republic) (Eversmann, 1852). Only two species were described from European part of Russia by Meyer (1922) and both species are not valid now (see section on taxonomy for details).

Up until now a total of twenty six *Sphecodes* species have been recorded from the European part of Russia (Eversmann, 1852; Morawitz, 1874; Pesenko, 1972; Osytshnjuk *et al.*, 1978; Warncke, 1992). *Sphecodes* records published by Lykov (2001) and Chenikalova (2005) are of problematic quality and were not available for checks so are not considered here.

Based on a comprehensive study of specimens in various collections we here list 28 species of the genus *Sphecodes*, with two species newly recorded from Russia (*S. majalis* Pérez, 1903 and *S. nomioides* Pesenko, 1979). *Sphecodes marginatus* Hagens, 1882 and *S. zangherii* Noskiewicz, 1931 were erroneously recorded from Russia and are removed from the list of Russian species. In total now 35 *Sphecodes* species are known from Russia (European part – 28; Asian part – 26). Currently, the genus *Sphecodes* has 294 described species worldwide (Ascher & Pickering, 2016), at the least 67 species are known from the Palaearctic Region (Astafurova & Proshchalykin, 2015c). Thus more than 10% of the world *Sphecodes* species and 52% of the Palaearctic species occur in Russia. Moreover, out of 33 Central European species (Bogusch & Straka, 2012), 28 species occur in European part of Russia.

Acronyms for collections from which specimens were borrowed or are deposited are as follows: CFUS – V.I. Vernadsky Crimean Federal University, Simferopol, Russia; MNHU – Museum für Naturkunde an der Humboldt Universität zu Berlin, Germany; ZISP – Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia; ZMMU – Zoological Museum of the Moscow State University, Russia.

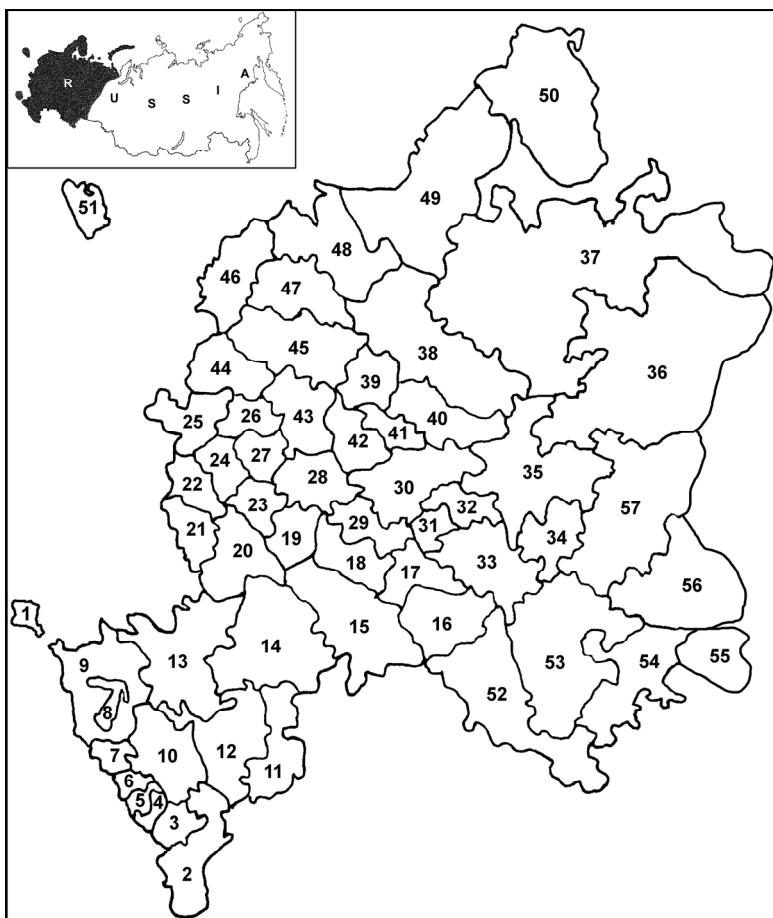


Fig. 1. Administrative maps of European part of Russia including Ural. 1 – Crimea Rep. (including Sevastopol); 2-10 – North Caucasus (2 – Dagestan Rep., 3 – Chechnya Rep., 4 – Ingushetia Rep., 5 – Severnaya Ossetia Rep., 6 – Kabardino-Balkarskaya Rep., 7 – Karachaevo-Cherkesk Rep., 8 – Adygea Rep., 9 – Krasnodar Terr., 10 – Stavropol Terr.); 11-51 – European part (11 – Astrakhan Prov., 12 – Kalmykia Rep., 13 – Rostov Prov., 14 – Volgograd Prov., 15 – Saratov Prov., 16 – Samara Prov., 17 – Ul'yanovsk Prov., 18 – Penza Prov., 19 – Tambov Prov., 20 – Voronezh Prov., 21 – Belgorod Prov., 22 – Kursk Prov., 23 – Lipetsk Prov., 24 – Orel Prov., 25 – Bryansk Prov., 26 – Kaluga Prov., 27 – Tula Prov., 28 – Ryazan Prov., 29 – Mordovia Rep., 30 – Nizhegorodskaya Prov., 31 – Chuvash Rep., 32 – Mary El Rep., 33 – Tatarstan Rep., 34 – Udmurtia Rep., 35 – Kirov Prov., 36 – Komi Rep., 37 – Arkhangelsk Prov., 38 – Vologda Prov., 39 – Yaroslavl Prov., 40 – Kostroma Prov., 41 – Ivanovo Prov., 42 – Vladimir Prov., 43 – Moscow Prov. (including Moscow), 44 – Smolensk Prov., 45 – Tver Prov., 46 – Pskov Prov., 47 – Novgorod Prov., 48 – Leningradskaya Prov. (including St. Petersburg), 49 – Karelia Rep., 50 – Murmansk Prov., 51 – Kaliningrad Prov.; 52-57 – Ural (52 – Orenburg Prov., 53 – Bashkortostan Rep., 54 – Chelyabinsk Prov., 55 – Kurgan Prov., 56 – Sverdlovskaya Prov., 57 – Perm Terr.).

The results presented in this paper are based on about 2500 specimens mainly collected in the last few decades by entomologists in the European part of Russia, that are currently housed in the ZISP, CFUS and ZMMU. We have used the following abbreviations for collectors: GV – G.A. Viktorov; MM – M.V. Mokrousov; MP – M.Yu. Proshchalykin; NV – N.B. Vinokurov; SI – S.P. Ivanov; SM – S.I. Malyshev; VT – V.I. Tobias; YP – Yu.A. Pesenko.

Hard brackets are used when information is added to specimen label information (e.g. current name of an old place name). The distribution of *Sphecodes* follows K. Warncke (1992), P. Bogush and J. Straka (2012), Yu. Astafurova and M. Proshchalykin (2014, 2015a, b, 2016), and H. Özbek *et al.* (2015). New distribution records are marked with an asterisk (*).

LIST OF THE SPECIES

Sphecodes albilabris (Fabricius, 1793)

Nomada albilabris Fabricius, 1793: 349, ♀, ♂ (type locality: Germany).

SPECIMENS EXAMINED. 113 ♀, 69 ♂. **Russia.** **Crimea Rep.*: Staryi Krym, Saki; Feodosiya, Simferopol; *Dagestan Rep.*: Kumtorkala sands; Kizlyar; **Krasnodar Terr.*: Ekarerinodar[=Krasnodar]; **Stavropol Terr.*: Stavropol; Shpakovskoe; *Rostov Prov.*: Dubovskii; Zimovniki; Rostov on Don; Bagaevskii; Persiyanovka; **Astrakhan Prov.*: Zam'yany; Astrakhan; *Volgograd Prov.*: Kamyshin; Sarepta [=Volgograd]; Bakalda; Kalach on Don; Sestrenki; Tinguta; *Saratov Prov.*: Voskresensk; Bannovka; *Samara Prov.*: Nikolaevskii uezd; Zhigulevskii Nature Reserve; *Penza Prov.*: Oktyab'rskoe; Bikmurzino; Varvarino; Sekretarka; Penza; Voskresenovka; **Voronezh Prov.*: Bobrov; **Belgorod Prov.*: Borisovka; Pulyaevka; **Kursk Prov.*: Borisovka; Kursk; Nikol'skoe; Antonovka; **Nizhegorodskaya Prov.*: Staraya Pustyn; Kerzhenskii Nature Reserve; Elesino; Dzerzhinsk; Chernozer'e; Rustai; Zelenyi Gorod; Vasil'sursk; **Chuvash Rep.*: Il'ina Gora; *Kirov Prov.*: Svecha; Maradykovskii; Orlov; **Ivanovo Prov.*: Alekhino; *Moscow Prov.*: Luzhki; Kolomna; Serpukhov; Zvenigorod; Proskurov; **Tver Prov.*: Udomel'skii distr.; Maksatikha; *Leningradskaya Prov.*: Gatchina; Yashchera; Komarovo; Luga; Sestroretsk; Solntsev Bereg; **Orenburg Prov.*: Izhberda; Orenburg; Spassk; **Sverdlovskaya Prov.*: Dvurechensk.

PUBLISHED RECORDS. Eversmann, 1852: 48 (as *Dichroa fuscipennis* Germar, Orenburg Prov., Saratov Prov.), Morawitz, 1869: 22 (as *Sphecodes fuscipennis* (Germar), St. Petersburg); 1874: 179 (as *S. fuscipennis*, Dagestan Rep.); Meyer, 1925: 3 (as *S. fuscipennis*, Volgograd Prov.); Malyshev, 1927: 409 (as *S. fuscipennis*, Kursk Prov.); Nikiforuk, 1957: 148 (as *S. fuscipennis*, Bashkortostan Rep.); Pesenko, 1972: 293 (as *S. fuscipennis*, Rostov Prov.); Warncke, 1992: 50 (map) (Rostov Prov., Volgograd Prov., Samara Prov., Tatarstan Prov.); Ruchin & Shibaev, 2008: 337 (Mordovia Rep.); Kuznetsova, 2009: 52 (Lipetsk Prov.); Shibaev & Polumordvinov, 2012: 276 (Penza Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Leningradskaya Prov. and east to Far East), Europe (north to Finland and Sweden), Kazakhstan, Central Asia, Turkey, Syria, Caucasus, North Africa, Israel, India.

REMARK. We observed females of this species invading nests of *Colletes cunicularius* (L.) near Luga, Leningradskaya Prov.

***Sphecodes alternatus* Smith, 1853**

Sphecodes alternatus Smith, 1853: 36, ♀ (type locality: Albania).

SPECIMENS EXAMINED. **Russia.** **Crimea Rep.*: Kazantip, 4.VI 1927, 1 ♀ (E. Kuznetsov); Torkonkhut, 16.V 1998, 1 ♀ (SI) [CFUS]; Khersones, 10.VIII 1914, 1 ♀ (V. Pliginsky); Staryi Krym, 10-15.VII 1904, 2 ♀ (D. Glazunov); Saki, 30.VII 1913, 1 ♀; 17.VII 1914, 1 ♀ (V. Pliginsky); **Dagestan Rep.*: 9 km SSE Kochubei, 21-22.VII 2015, 3 ♂ (MP); **Adygea Rep.*: Shuntuk, 3-15.VII 1935, 7 ♀ (Petrukhina); 22.V 1937, 1 ♀ (Andreeva); **Stavropol Terr.*: Petrovskoe, 1.VII 1924, 1 ♀ (Smelova); Stavropol, 17.VII 1927, 1 ♀ (V. Belizin); 20 km W Stavropol, 20.VI 1987, 1 ♀; 17-27.VII 1989, 2 ♀ (S. Belokobylskij); **Astrakhan Prov.*: Volzhskii, 27.V 2016 (Yu. Astafurova); **Kalmykia Rep.*: 23 km SEE Khulkhuta, 15-16.VII 2015, 1 ♀ (MP); *Rostov Prov.*: Bagaevskii, 10.VII-8.VIII 1970, 4 ♀ (YP); **Volograd Prov.*: Sarepta[=Volgograd], 16-20.VIII 1929, 4 ♀ (A. Shestakov); Kamyshin, 26.VI 1949, 1 ♂ (GV) [ZMMU]; Tinguta, 6.VII 1953, 1 ♀ (I. Razumova); **Orenburg Prov.*: Orenburg, 15.VI 1925, 1 ♀; 1-3.IX 1926, 2 ♀; 24.VII 1927, 2 ♀; 17.VI 1928, 1 ♀; 8.VIII 1929, 1 ♀ (P. Vorontsovskii).

PUBLISHED RECORDS. Pesenko, 1972: 294 (Rostov Prov.).

DISTRIBUTION. Russia (North Caucasus, South of European part, Ural, Altai Rep., Khakassia Rep.), South and Central Europe, Caucasus, Turkey, Iran, Central Asia, North Africa.

***Sphecodes crassus* Thomson, 1870**

Sphecodes crassus Thomson, 1870: 100, ♀ (type locality: southern Sweden).

SPECIMENS EXAMINED. 46 ♀, 21 ♂. **Russia.** **Crimea Rep.*: Kholmy; Kerch; **Stavropol Prov.*: Shpakovskoe; Stavropol; **Kursk Prov.*: Borisovka; Zheleznogorsk; **Ryazan Prov.*: Gemyachka; *Mordovia Rep.*: Boldovo; *Kirov Prov.*: Svecha; Shmeleva; Orlov; **Udmurtia Rep.*: Izevsk; Grekhovo; **Yaroslavl Prov.*: Berditsyno; Yaroslavl; Filino; *Moscow Prov.*: Leninskaya; Orekhovo-Zuevo; Khot'kovo; Moscow; **Smolensk Prov.*: "Smolenskoe poozer'e" Nature park; **Leningradskaya Prov.*: St. Petersburg; Pargolovo; Pavlovsk; Pushkin; Gorskaya; Siverskaya; *Orenburg Prov.*: Belye Kluchi; **Sverdlovskaya Prov.*: Dvurechensk; **Perm Prov.*: Ust-Kishert.

PUBLISHED RECORDS. Eversmann, 1852: 49 (as *Dichroa geofrella* Illiger [sic!], Orenburg Prov.); Nikiforuk, 1957: 148 (as *S. divisus* Hagens, Bashkortostan Rep.); Sedykh, 1974: 159 (as *S. divisus*, Komi Rep.); Situdikov, 1986: 104 (as *S. divisus*, Udmurtia Rep.); Blagoveshchenskaya, 1970: 214 (as *S. divisus*, Middle

Volga Reg.); Pesenko, 1972: 293 (as *S. divisus*, Rostov Prov.); Kuznetsova, 2009: 52 (as *S. divisus*, Lipetsk Prov.); Ruchin & Shibaev, 2008: 337 (Mordovia Rep.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Komi Rep. and east to Far East), Europe (north to 64°), Caucasus, Turkey, Iran, Mongolia, Japan, North Africa.

***Sphecodes cristatus* Hagens, 1882**

Sphecodes cristatus Hagens, 1882: 218, ♀ (type locality: Germany).

SPECIMENS EXAMINED. **Russia.** **Dagestan Rep.*: 12 km SSW Kizlyar, 22-23.VII 2015, 1 ♀ (MP); **Severnaya Osetia Rep.*: Gisel, 10 km W Vladikavkaz, 25.VII 1990, 1 ♀ (YP); *Krasnodar Terr.*: Sochi, Okhun, 27.IX 1926, 3 ♂ (A. Shestakov) [*S. cristatus*, det. Blüthgen]; Lazarevskoe, 21.VII 1984, 1 ♀ (Shalepo); *Volgograd Prov.*: Tinguta, 6.VII 1953, 1 ♂ (I. Razumova) [ZMMU]; Ilovinskaya, 10.VII 1949, 1 ♂ (GV) [ZMMU]; **Kursk Prov.*: Borisovka, 10.VII 1916, 1 ♂ (SM); Zakharkovo, 11.VIII 1898, 1 ♂ (R. Shmidt); Zheleznogorsk, 12.VII 1984, 1 ♀ (Zvantsov); **Ryazan Prov.*: Gremyachka, 5.VIII 1899; 20.VI 1909, 2 ♀ (A. Semenov); *Udmurtia Rep.*: Grekhovo, 29.VII 1980, 1 ♂ (A. Sittikov); Izhevsk, 20.VIII 1982, 1 ♂ (Tatarsky); **Orenburg Prov.*: near Orenburg, 28.VII 1912, 1 ♀ (P. Vorontsovskii).

PUBLISHED RECORDS. Meyer, 1925: 5 (Tatarstan Rep.); Blüthgen, 1934: 38 (Krasnodar Terr.); Blagoveshchenskaya, 1970: 214 (Middle Volga Reg.); Sittikov, 1986: 104 (Udmurtia Rep.); Warncke, 1992: 45 (map) (Tatarstan Rep.); Kuznetsova, 2009: 52 (Lipetsk Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Udmurtia Rep. and east to Far East), Europe (north to Sweden), Caucasus, Turkey, Mongolia, China (Beijing).

***Sphecodes croaticus* Meyer, 1922**

Sphecodes croaticus Meyer, 1922: 171, ♂ (type locality: Croatia).

SPECIMENS EXAMINED. **Russia.** **Crimea Rep.*: Sevastopol, 4.VI 1912, 1 ♀ (V. Pliginsky); Zolotoe, 4.VII 1999, 1 ♂ (SI) [CFUS]; **Kabardino-Balkarskaya Rep.*: near Nalchik, 21.VIII 1993, 2 ♂ (V. Stain); **Krasnodar Terr.*: Sochi, Okhun, 27.IX 1926, 1 ♂ (A. Shestakov) [*S. marginatus*, det. Blüthgen]; **Rostov Prov.*: Bagaevskii, 8.VII 1970, 1 ♂ (YP); **Volgograd Prov.*: Tinguta, 11.VIII 1952, 1 ♂ (GV) [ZMMU]; **Voronezh Prov.*: Divnogor'e, 23.VIII 1979, 1 ♂ (V. Storozheva); **Nizhegorodskaya Prov.*: Volodarskiy Distr., Dal'nii, 6.VIII 2007, 1 ♂ (MM).

PUBLISHED RECORDS. Pesenko, 1972: 294 (Rostov Prov.); Warncke, 1992: 32 (Don River).

DISTRIBUTION. Russia (Crimea, North Caucasus, South and Central of European part), Central Europe, Caucasus, Turkey.

REMARK. Specimens from Rostov Prov. [Bagaevskii, 28.V 1968, 2 ♀] recorded by Pesenko (1972: 294) as *S. croaticus* belongs to *S. pinguiculus* Pérez.

***Sphecodes ephippius* (Linné, 1767)**

Sphecodes ephippia Linné, 1767: 944, ♂ (type locality: Sweden).

SPECIMENS EXAMINED. 245 ♀, 98 ♂. **Russia.** *Crimea Rep.*: Schastlivoe; Urozhainoe; Krasnoles'e; Kazantip; Staryi Krym; Simferopol; Sevastopol; Alma; Tarkhonkut; **Severnaya Osetia Rep.*: Vladikavkaz; **Adygea Rep.*: Shuntuk; Maikop; **Krasnodar Terr.*: Lazarevskoe; **Kabardino-Balkarskaya Rep.*: Teberdinskii Nature Reserve; **Stavropol Terr.*: Stavropol; Shpakovskoe; **Astrakhan Prov.*: Ushakovka; **Rostov Prov.*: Bagaevskii; Volgodonsk; Kuberle; Rostov on Don; *Volgograd Prov.*: Kamyshin; Volgograd; *Saratov Prov.*: Voskresensk; *Samara Prov.*: Zhiguli; *Penza Prov.*: Voskresenovka; Penza; Pobeda; Karlygan; Nikol'skoe; **Voronezh Prov.*: Vorontsovka; Ol'khovatka; **Belgorod Prov.*: Borisovka; **Kursk Prov.*: Borisovka; Kursk; Zheleznogorsk; **Ryazan Prov.*: Gremyachka; **Nizhegorodskaya Prov.*: Nizhniy Novgorod; **Chuvash Rep.*: Asanovo; *Tatarstan Rep.*: Kazan; **Udmurtia Rep.*: Izhevsk; Kil'mez; *Kirov Prov.*: Shmelevo; Svecha; **Vologda Prov.*: Nelazskoe; **Yaroslavl Prov.*: Berditsyno; Filino; Yaroslavl; **Ivanovo Prov.*: Alekhino; *Moscow Prov.*: Krylatskie kholmy; Khot'kovo; Zvenigorod; Kuntsevo; Kolomna; Molitvino; **Smolensk Prov.*: "Smolenskoe poozer'e" National park; *Leningradskaya Prov.*: Peterhof; Tolmachevo; Luga; Pushkin; Shuvalovo; **Orenburg Prov.*: Orenburg; **Chelyabinsk Prov.*: Zhdanovskoe; *Sverdlovskaya Prov.*: Dvurechensk; Kiprino; Visimskii Nature Reserve; **Perm Terr.*: Ust-Kishert.

PUBLISHED RECORDS. Osten-Saken, 1858: 151 (as *S. similis* Wesmael, environs of St. Petersburg); Warncke, 1992: 42 (map) (Crimea Rep., Volgograd Prov., Saratov Prov., Samara Prov., Tatarstan Prov., Bashkortostan Prov., Sverdlovskaya Prov.); Shibaev & Polumordvinov, 2012: 276 (Penza Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Leningradskaya Prov. and east to Irkutsk Prov.), Europe (north to 62°), Caucasus, Turkey, Central Asia, Mongolia, North Africa.

***Sphecodes ferruginatus* Hagens, 1882**

Sphecodes ferruginatus Hagens, 1882: 221, ♀, ♂ (type locality: Germany).

SPECIMENS EXAMINED. 28 ♀, 41 ♂. **Russia.** **Crimea Rep.*: Sevastopol; **Chechnya Rep.*: Borzoi; **Severnaya Osetia Rep.*: Vladikavkaz; **Karachaevo-Cherkesk Rep.*: 10 km S Arkhyz; **Krasnodar Terr.*: Lazarevskoe; **Stavropol Terr.*: Shkotovskoe; **Kursk Prov.*: Borisovka; Kursk; Zheleznogorsk; *Ryazan Prov.*: Gremyachka; **Nizhegorodskaya Prov.*: Bolshoe Ustinovskoe; *Udmurtia Rep.*: Izhevsk; **Vologda Prov.*: Nelazskoe; Trostyanets; **Yaroslavl Prov.*: Yaroslavl, Berditsino; **Kostroma Prov.*: Kostroma; *Moscow Prov.*: Domodedovo; **Smolensk Prov.*: "Smolenskoe poozer'e" Natural park; **Pskov Prov.*: Troikino; **Leningradskaya Prov.*: Levashovo; Serezhino, Luga, St. Petersburg; **Bashkortostan Rep.*: Birsk, Irgizla; **Sverdlovskaya Prov.*: Dvurechensk; **Perm Terr.*: Ust-Kishert.

PUBLISHED RECORDS. Anan'eva & Kochetkov, 1999: 8 (Ryazan Prov.); Kuznetsova, 2009: 52 (Lipetsk Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Leningradskaya Prov. and east to Far East), Europe (north to 66°), Caucasus, Turkey, Japan.

REMARK. The record of *S. ferruginatus* from Udmurtia (Siddikov, 1986: 104) is wrong and belongs to *S. miniatus* Hagens.

***Sphecodes geoffrellus* (Kirby, 1802)**

Melitta geoffrella Kirby, 1802: 45, ♀ (type locality: England).

SPECIMENS EXAMINED. 53 ♀, 60 ♂. **Russia.** *Severnaya Osetia Rep.: Fiagdon; Vladikavkaz; *Kabardino-Balkarskaya Rep.: Bashil; Nalchik; *Karachaevo-Cherkesk Rep.: Uch-Kulan; *Voronezh Prov.: Ramon; *Kursk Prov.: Borisovka; Krasevo; Kursk; *Ryazan Prov.: Gremyachka; *Nizhegorodskaya Prov.: Vetchak; Nizhniy Novgorod; *Tatarstan Prov.: Kazan; Udmurtia Rep.: Izhevsk; Grehovo; Kirov Prov.: Svecha; Shmelevo; *Yaroslavl Prov.: Berditsyno; Yaroslavl; Filino; Moscow Prov.: Kosino; *Novgorod Prov.: Tychkino; *Leningradskaya Prov.: Gorskaya; Lebyazh'e; Luga; Siverskaya; Pavlovsk; Pushkin; *Karelia Rep.: Konchzero; Kanzanvolok; Meyeri; *Chelyabinsk Prov.: Il'menskii Nature Reserve; Sverdlovskaya Prov.: Dvurechensk; *Perm Prov.: Ust-Kishert.

PUBLISHED RECORDS. Sedykh, 1974: 159 (as *S. fasciatus* Hagens, Komi Rep.); Siddikov, 1986: 104 (as *S. fasciatus*, Udmurtia Rep.); Warneke, 1992: 55 (map) (Sverdlovskaya Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. The species is widespread in the temperate zone of Palaearctic, rare and mainly occurs in mountains in south part of natural habitat. Russia (north to Karelia Rep. and east to Far East), Europe (north to 66°), Caucasus, Turkey, Near East, Kazakhstan, Mongolia, Japan, North Africa.

***Sphecodes gibbus* (Linnaeus, 1758)**

Sphex gibba Linnaeus, 1758: 571, ♀ (type locality: Sweden).

SPECIMENS EXAMINED. 271 ♀, 132 ♂. **Russia.** Crimea Rep.: Staryi Krym, Saki; Khersones; Karadag; Tarkhankut; Dagestan Rep.: Manaskent; Gunib; *Severnaya Osetia Rep.: Alagir; *Kabardino-Balkarskaya Rep.: Teberdinskii Nature Reserve; Nal'chik; *Adygea Rep.: Shuntuk; *Krasnodar Terr.: Sochi; Severskaya; Krasnaya Polyana; *Stavropol Terr.: Novozavedennoe; Stavropol; Stepnoi; *Astrakhan Prov.: Liman; *Kalmykia Rep.: Yashkul; Artezian; Sadovoe; Rybachii; Rostov Prov.: Bagaevskii; Volgograd Prov.: Kamyshin; Sarepta[=Volgograd]; Saratov Prov.: Voskresensk; Bannovka; Engel's; Samara Prov.: Roslyakovo; Penza Prov.: Birkmurzino; Baika; "Privolzhskaya Lesostep" Nature Reserve; Zubrilovo; *Voronezh Prov.: Khoperskii Nature Reserve; *Kursk Prov.: Borisovka; Kursk; Zheleznogorsk; *Ryazan Prov.: Gremyachka; *Chuvash Rep.: Eshmikeevo; Kirov

Prov.: Shmelevo; **Yaroslavl Prov.*: Berditsyno; Yaroslavl, Filino; Gedenevo; *Moscow Prov.*: Khot'kovo; *Novgorod Prov.*: Borovichi; *Leningradskaya Prov.*: Tolmachevo; Ladoga Lake; Shuvalovo; Sablino; *Orenburg Prov.*: Belye Klyuchi; Orsk; Spassk; Orenburg; *Bashkortostan Rep.*: Aksenovo; *Sverdlovskaya Prov.*: Dvurechensk; Visimskii Nature Reserve.

PUBLISHED RECORDS. Eversmann, 1852: 48 (as *Dichroa analis* Illiger and *D. monicornis* Illiger, Tatarstan Rep., Orenburg Prov., Ul'yanovsk Prov., Saratov Prov.); Osten-Saken, 1858: 151 (environs of St. Petersburg); Morawitz, 1869: 22 (St. Petersburg); 1874: 179 (Dagestan Rep.); Meyer, 1922: 113 ("Taurien"); 1925: 4 (Tatarstan Rep.); Nikiforuk, 1957: 148 (Bashkortostan Rep.); Pesenko, 1972: 293 (Rostov Prov.); Sedykh, 1974: 159 (Komi Rep.); Sitsikov, 1986: 104 (Udmurtia Rep.); Warncke, 1992: 49 (map) (Crimea Rep., Saratov Prov., Samara Prov., Tatarstan Rep., Bashkortostan Rep., Orenburg Prov., Sverdlovskaya Prov.); Kuznetsova, 2009: 53 (Lipetsk Prov.); Shibaev & Polumordvinov, 2012: 276 (Penza Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Komi Rep. and east to Yakutia), Europe (north to 63°), Caucasus, Turkey, Pakistan, Israel, Central Asia, Mongolia, China (Xinjiang), North Africa, India.

Sphecodes hyalinatus Hagens, 1882

Sphecodes hyalinatus Hagens, 1882: 222, ♀, ♂ (type locality: Germany).

SPECIMENS EXAMINED. **Russia.** **Crimea Rep.*: Zolotoe, 4.VII 1999, 1 ♂ (SI) [CFUS]; **Dagestan Rep.*: Derbent, 27.VII 2010, 1 ♂ (A. Satunin); **Kabardino-Balkarskaya Rep.*: Nalchik, 6.VII 1909, 1 ♂, 14.V 1987, 1 ♀ (NV); **Krasnodar Terr.*: Sochi, Lazarevskoe, 18.IV 1975, 2 ♀ (VT); **Stavropol Prov.*: Shpakovskoe, 27.VII 1989, 1 ♂ (SB); **Voronezh Prov.*: Varvarovka, Khoperskii Nature Reserve, 8.VIII 1977, 1 ♂ (VT); **Nizhegorodskaya Prov.*: Nizhniy Novgorod, 17.V 2006, 1 ♀ (MM); **Udmurtia Rep.*: Izhevsk, 4.V 1985, 1 ♀ (A. Sitsikov); *Kirov Prov.*: Svecha, 6.VIII 2001; 24.IV 2002, 1 ♀, 6 ♂; Orlov, 8.IX 1999, 1 ♂; Shmelevo, 11.VIII 2000, 1 ♂ (G. Yuferev); **Arkhangelsk Prov.*: Ust-Sylma, 15.V 1911, 1 ♀ (Trzheskovskii); **Yaroslavl Prov.*: Berditsino, 9.V., 22-28.VII 1907, 1 ♀, 3 ♂; Yaroslavl, 16.VII 1907, 2 ♂ (A. Yakovlev); *Moscow Prov.*: Privalovo, 13.VIII 1982, 2 ♂ (A. Zvantsov); **Tver Prov.*: Bologoe, 2.IX 1907, 1 ♂ (Zaytzev); **Leningradskaya Prov.*: Shuvalovo, 22.VIII 1915, 2 ♂ (Yakobson); Gatchina, 8.VIII 1903, 1 ♀ (V. Borovskii); Pushkin, 19.VII 1973, 1 ♀ (YP); **Karelia Rep.*: Petrozavodsk, 9-12.VII 2012, 1 ♀; Vodlozerskii Nature park, 8.VI 2002, 1 ♀; Onega Lake, Bolshoi Klimenetskii Isl., 19.VII 2008, 1 ♀; Gomsel'ga, 3-7.VI 2013, 1 ♀ (A. Humala); **Murmansk Prov.*: Vudyar Lake, 28.VI 1934, 1 ♀ (Fridolin); Imandra Lake, 17.VII 1928, 1 ♀ (V. Stark); **Orenburg Prov.*: Spassk, 1 ♀ (coll. Eversmann); **Bashkortostan Rep.*: Belbey, 13.VI 1907, 1 ♀ (A. Grigor'ev).

PUBLISHED RECORDS. Sedykh, 1974: 159 (Komi Rep.); Kuznetsova, 2009: 53 (Lipetsk Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. The species is widespread in the temperate zone of Palaearctic, rare and mainly occurs in mountains in south part of natural habitat. Russia (north to Murmansk Prov., Komi Rep., Yakutia and Magadan Prov.), Europe (north to 68°), Caucasus.

***Sphecodes intermedius* Blüthgen, 1923**

Sphecodes intermedius Blüthgen, 1923: 500, ♀, ♂ (type locality: «Kaukasus»).

SPECIMENS EXAMINED. **Russia.** *Crimea Rep.: Kholmy, 10-14.VII 1904, 2 ♀, 5 ♂ (D. Glasunov); Rostov Prov.: Bagaevskii, 2.VIII 1960; 11.V-30.VII 1970; 25.V 1971, 3 ♀, 15 ♂; (YP); Volgograd Prov.: Volgograd, 31.VII 1954, 1 ♀; Tinguta, 6.VII 1953, 1 ♀ (I. Razumova) [ZMMU]; Kamyshin, 12.V 1931, 1 ♂ (V. Gussakovskij); Sarepta[=Volgograd], 28.IV 1902, 1 ♂ (M. Koch); *Orenburg Prov.: near Orenburg, 3.VI 1923, 1 ♀ (P. Vorontsovsky).

PUBLISHED RECORDS. Blüthgen, 1934: 64 (“Südrußland”); Pesenko, 1972: 294 (Rostov Prov.); Warncke, 1992: 31 (Rostov Prov., Volgograd Prov.); Kuznetsova, 2009: 53 (Lipetsk Prov.).

DISTRIBUTION. Russia (South of European part, South Ural), North Africa, Europe (Spain, Czech Republic, Slovakia, Hungary, Ukraine), Caucasus, Turkey, Central Asia.

***Sphecodes longulus* Hagens, 1882**

Sphecodes longulus Hagens, 1882: 226, ♀, ♂ (type locality: Germany).

SPECIMENS EXAMINED. 38 ♀, 19 ♂. **Russia.** *Krasnodar Terr.: Lazarevskoe; *Stavropol Prov.: Kislovodsk; Novozavedennoe; Stavropol; *Astrakhan Prov.: Astrakhanskii Nature Reserve; Dosang; *Kalmykia Rep.: Artezian; Rostov Prov.: Persyanovka; *Volgograd Prov.: Gorodishche; Kamyshin; Kalach on Don; Sarepta[=Volgograd]; *Penza Prov.: Penza; *Kursk Prov.: Borisovka; Kursk; Nizhegorodskaya Prov.: Ilingorsk; Dzerzhinsk; Nizhniy Novgorod; Madaevo; Kirov Prov.: Shmelevo; Svecha; *Yaroslavl Prov.: Berditsyno; Filino; Yaroslavl; Moscow Prov.: Serpukhovo; *Leningradskaya Prov.: Luga; *Orenburg Prov.: Spassk.

PUBLISHED RECORDS. Blagoveshchenskaya, 1970: 214 (Middle Volga Reg.); Pesenko, 1972: 294 (Rostov Prov.); Warncke, 1992: 40 (map) (Rostov Prov., Tatarstan Prov.); Kuznetsova, 2009: 53 (Lipetsk Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Leningradskaya Prov. and east to Far East), Europe (north to Finland, Sweden, Denmark, England), Caucasus, Turkey, Syria, Tajikistan, Japan.

***Sphecodes majalis* Pérez, 1903**

Sphecodes majalis Pérez, 1903: CCXIX, ♀ (type locality: SW France).

SPECIMENS EXAMINED. **Russia.** *Crimea Rep.*: Sevastopol, 19.IV 1909, 1 ♀ (V. Pliginsky); Krasnoles'e, 22.IV 1983, 1 ♂ (A. Zagulaev); Yalta, 28.IV 1972, 1 ♂, 2 ♀ (VT); 14.IV 1989, 2 ♂, 1 ♀ (D. Kasparyan); *Krasnodar Terr.*: Sochi, Lazarevskoe, 18.IV 1975, 1 ♀ (VT); *Kursk Prov.*: Borisovka, 25.IV 1907, 1 ♂ (SM).

DISTRIBUTION. *Russia (Crimea Rep., Krasnodar Terr., Kursk Prov.), Europe (north to Nederland), Caucasus, Turkey, Iran, Algeria.

***Sphecodes miniatus* Hagens, 1882**

Sphecodes miniatus Hagens, 1882: 223, ♀, ♂ (type locality: Germany).

Sphecodes pilicornis Meyer, 1922: 170: ♂ (holotype: ♂, Russia: "Kargala bei Orenburg" [Orenburg Prov.: Tatarskaya Kargala, 10 km N Orenburg], MNHU). Synonymized by Blüthgen, 1923: 508; Proshchalykin & Astafurova, 2016: 16.

SPECIMENS EXAMINED. 103 ♀, 30 ♂. **Russia.** **Crimea Rep.*: Sevastopol; Tarkhankut; Gvardeisk; **Krasnodar Prov.*: Lazarevskoe; **Stavropol Prov.*: Novozavedennoe; Stavropol; *Rostov Prov.*: Kovrino-2; Persiyansk; **Volgograd Prov.*: Bakalda; Kamyshin; Volgograd; 15 km S Uryupinsk; **Saratov Prov.*: Voskresenskoe; **Samara Prov.*: Bezenchuk; **Penza Prov.*: Sosnovka; **Voronezh Prov.*: Varvarino; Novokhopersk; **Kursk Prov.*: Borisovka; **Nizhegorodskaya Prov.*: Nizhniy Novgorod; Dzerzhinsk; Kerzhenskii Nature Reserve; **Chuvash Rep.*: Aksarino; *Udmurtia Rep.*: Grekhovo; Izhevsk; Kilmez; *Kirov Prov.*: Shmelevo; Svecha; Orlov; **Yaroslavl Prov.*: Yaroslavl; Filino; *Moscow Prov.*: Khot'kovo; **Leningradskaya Prov.*: Luga; Gatchina; Tolmachevo; Pushkin; Sablino; Pavlovsk; **Orenburg Prov.*: Orenburg; Belye Kluchi.

PUBLISHED RECORDS. Pesenko, 1972: 294 (as *S. minuatus*, Rostov Prov.); Situdikov, 1986: 104 (Udmurtia Rep.); Warncke, 1992: 55 (map) (Rostov Prov., Baskortostan Rep.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 35 (Moscow Prov.).

DISTRIBUTION. Russia (north to Leningradskaya Prov. and east to Far East), Europe (north to 62°), Caucasus, Mongolia.

***Sphecodes monilicornis* (Kirby, 1802)**

Melitta monilicornis Kirby, 1802: 47, ♂ (type locality: England).

SPECIMENS EXAMINED. 143 ♀, 133 ♂. **Russia.** **Crimea Rep.*: Saki; Urozhainoe; Alupka; Mramornoe; Kikineiz; Sevastopol; **Dagestan Rep.*: Derbent; **Kabardino-Balkarskaya Rep.*: Teberdinskii Nature Reserve; Baksan; **Krasnodar Terr.*: Lazarevskoe; Gelendzhik; **Stavropol Terr.*: Stavropol; Shpakovskoe; **Astrakhan Prov.*: Liman; *Kalmykia Rep.*: Artezian; *Rostov Prov.*: Persiyansk; *Volgograd Prov.*: Kamyshin; Sarepta[=Volgograd]; *Penza Prov.*: Chertkovo; Nikol'skoe; Karlygan; Penza; Bol'shoi V'yas; Kamennyi; **Voronezh Prov.*: Voronezh;

**Belgorod Prov.*: Borisovka; *Kursk Prov.*: Borisovka; Kursk; Zheleznogorsk; **Ryazan Prov.*: Gremyachka; *Mordovia Rep.*: Boldovo; *Udmurtia Rep.*: Izhevsk; *Nizhegorodskaya Prov.*: Staraya Pustyn; Pil'na; Chernozer'e; *Kirov Prov.*: Shmelevo; Svecha; **Yaroslavl Prov.*: Berditsyno; Kailovo; Yaroslavl; *Moscow Prov.*: Proskurov; Kolomna; **Leningradskaya Prov.*: Komarovo; Luga; Pushkin; Siverskaya; *Orenburg Prov.*: Orsk; **Sverdlovskaya Prov.*: Nizhneirginskoe; **Perm Terr.*: Ust-Kishert.

PUBLISHED RECORDS. Blagoveshchenskaya, 1970: 214 (Middle Volga Reg.); Pesenko, 1972: 293 (Rostov Prov.); Sitdikov, 1986: 104 (Udmurtia Rep.); Warncke, 1992: 44 (map) (Rostov Prov., Volgograd Prov., Saratov Prov., Samara Prov., Orenburg Prov.); Ruchin & Shibaev, 2008: 337 (Mordovia Rep.); Kuznetsova, 2009: 54 (Lipetsk Prov.); Shibaev & Polumordvinov, 2012: 276 (Penza Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 36 (Moscow Prov.).

DISTRIBUTION. Russia (north to Leningradskaya Prov. and east to Far East), Europe (north to 64°), Caucasus, Turkey, Pakistan, Central Asia, Mongolia, North Africa.

Sphecodes niger Hagens, 1874

Sphecodes niger Hagens, 1874: 43, ♀, ♂ (type locality: NW Germany).

SPECIMENS EXAMINED. **Russia.** **Kabardino-Balkarskaya Rep.*: Dzhinal, 900 m, 30.VI 2009, 1 ♀ (NV); **Krasnodar Terr.*: Sochi, Lazarvkoe, 16.IV 1975, 1 ♀ (VT); **Stavropol Terr.*: 30 km SE Stavropol, 18.VII 1998, 1 ♀ (E. Chenikalova); Kuma River, 10.VIII 2004, 2 ♀ (NV); **Volgograd Prov.*: Kamyshin, 8.VIII 1949, 1 ♂ (GV) [ZMMU]; **Kursk Prov.*: Borisovka, 29.VIII 1916, 1 ♂ (SM); **Ryazan Prov.*: Gremyacka, 28.VI 1900, 1 ♂, 1 ♀ (A. Semenov); **Nizhegorodskaya Prov.*: Vetchak, 19.VIII 2007, 1 ♀ (MM); **Udmurtia Rep.*: Urom, 31.VI 1982, 1 ♀ (A. Sitdikov); *Moscow Prov.*: Zvenigorod, 30.VIII 1961, 1 ♀ (V. Rudolf).

PUBLISHED RECORDS. Kuznetsova, 2009: 54 (Lipetsk Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Moscow Prov. and east to Udmurtia Rep.), Europe (north to Sweden and Denmark), Turkey.

Sphecodes nomioidis Pesenko, 1979

Sphecodes nomioidis Pesenko, 1979: 860, ♀ (type locality: Ukraine).

SPECIMENS EXAMINED. **Russia.** **Belgorod Prov.*: Borisovka, 28.V, 20.VII 1959, 2 ♀ (Y. Wu); **Kursk Prov.*: Borisovka, 22.V 1916, 2 ♀; 10.VII 1907, 2 ♀ (SM); 24.V 1927, 1 ♀ (Pesotskaya); **Nizhegorodskaya Prov.*: Kerzhenskii Nature Reserve, Chernozer'e, 22.V 2005, 1 ♀ (MM).

DISTRIBUTION. *Russia (Belgorod Prov., Kursk Prov., Nizhegorodskaya Prov.), Central Europe, Ukraine, Turkey.

***Sphecodes olivieri* Lepeletier de Saint-Fargeau, 1825**

Sphecodes olivieri Lepeletier de Saint-Fargeau in Lepeletier de Saint-Fargeau & Serville, 1825: 448, ♂ (type locality: «Arabie»).

SPECIMENS EXAMINED. **Russia.** **Dagestan Rep.*: 9 km SSE Kochubei, 21-22.VII 2015, 1 ♀, 6 ♂ (MP); **Stavropol Terr.*: Zimnyaya Stavka, 15, 19.VII 1911, 1 ♀, 1 ♂ (Uvarov); **Astrakhan Prov.*: 13 km S Liman, 24-26.VII 2015, 1 ♀, 7 ♂ (MP); 35 km NNW Astrakhan, 26.VII 2015, 2 ♂ (MP); **Kalmykia Rep.*: 22 km E Yashkul, 16-18.VII 2015, 1 ♀ (MP); 17 km SWW Artezian, Kuma River, 18-21.VII 2015, 5 ♂ (MP).

PUBLISHED RECORDS. Warncke, 1992: 24 (Volgograd Prov.).

DISTRIBUTION. Russia (South of European part), South Europe, Caucasus, Turkey, Iran, Pakistan, Israel, Arabian Peninsula, Central Asia, North Africa.

***Sphecodes pellucidus* Smith, 1845**

Sphecodes pellucidus Smith, 1845: 1014, ♀, ♂ (type locality: England).

SPECIMENS EXAMINED. 182 ♀, 39 ♂. **Russia.** **Crimea Rep.*: Sevastopol; **Dagestan Rep.*: Kizlyar; Kochubei; Derbent; **Stavropol Terr.*: Shpakovskoe; *Volgograd Prov.*: Kamyshin; Sarepta [=Volgograd]; Tinguta; *Saratov Prov.*: Ozinki; Voskresensk; **Penza Prov.*: Voskresenovka; Penza; Morozovka; Pobeda; **Voronezh Prov.*: Khoperskii Nature Reserve; **Kursk Prov.*: Borisovka; Antonovka; Kursk; Nikol'skoe; Krasevo; **Nizhegorodskaya Prov.*: Kerzhenskii Nature Reserve; Dzerzhinsk; Chernozer'e; *Udmurtia Rep.*: Kil'mez; *Kirov Prov.*: Svecha; Maradykovskii; **Yaroslavl Prov.*: Berditsyno; Filino; Srednii; Yaroslavl; *Moscow Prov.*: Serebryanyi Bor; Zvenigorod; Domodedovo; Shatura; **Pskov Prov.*: Pskov; **Leningradskaya Prov.*: Komarovo; Ladoga Lake; Luga; Tolmachevo; Preobrazhenie; Petergof; Sablino; Sestroretsk; Yukki; Zaostrov'e; **Karelia Rep.*: Korbozero; Salmi; *Orenburg Prov.*: Orenburg, Spassk; *Sverdlovskaya Prov.*: Dvurechensk.

PUBLISHED RECORDS. Meyer, 1925: 7 (Saratov Prov.); Sedykh, 1974: 159 (Komi Rep.); Sitsikov, 1986: 104 (Udmurtia Rep.); Warncke, 1992: 43 (map) (Astrakhan Prov., Volgograd Prov., Saratov Prov., Samara Prov., Orenburg Prov., Sverdlovskaya Prov.), Kuznetsova, 2009: 54 (Lipetsk Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Karelia Rep. and east to Far East), Europe (north to 66°), Caucasus, Turkey, Iran, Kazakhstan, Mongolia, North China, North Africa.

REMARK. We observed females of this species invading nests of *Andrena barbilabris* (Kirby) near Luga, Leningradskaya Prov.

***Sphecodes pinguiculus* Pérez, 1903**

Sphecodes pinguiculus Pérez, 1903: CCXX, ♀ (type locality: Spain).

Sphecodes sareptensis Meyer, 1922: 170, ♂ (holotype: ♂, Russia: “Sarepta” [Volgodrad], MNU). Synonymized by Bogusch & Straka, 2012: 15.

SPECIMENS EXAMINED. **Russia.** **Astrakhan Prov.*: 13 km S Liman, 24-26.VII 2015, 1 ♀ (MP); **Rostov Prov.*: Bagaevskii, 28.V 1968, 2 ♀ (YP) [*S. croaticus* det. Yu. Pesenko]; *Volgograd Prov.*: Sarepta[=Volgograd], 17.V 1906, 1 ♀ (L. Wolmann).

PUBLISHED RECORDS. Meyer, 1922: 170 (as *Sphecodes sareptensis*, Volgograd Prov.); Warncke, 1992: 52 (map) (as *S. pinguiculus sareptensis*, Crimea Rep., Volgograd Prov.); Proshchalykin & Astafurova, 2012: 97 (Crimea Rep.).

DISTRIBUTION. Russia (South of European part, Eastern Siberia), South Europe, Caucasus, Turkey, Iran, Israel, Central Asia, Mongolia, North Africa, Cape Verde Islands.

Sphecodes pseudofasciatus Blüthgen, 1924

Sphecodes pseudofasciatus Blüthgen, 1924: 473, ♀, ♂ (N Spain).

SPECIMENS EXAMINED. **Russia.** **Krasnodar Terr.*: Krasnaya Polyana, 2.VII 1909, 1 ♀ (A. Yakovlev); Sochi, Lazarevskoe, 24.V 1973, 2 ♀; 12.VII 1974, 1 ♀, 2 ♂; 18.V 1975, 2 ♀; 11.VI 1976, 1 ♀; 27.VI 1976, 1 ♀ (VT); **Stavropol Terr.*: Stavropol, Botsad, 14.VII 1995, 1 ♀; 4.VII 2002, 1 ♀ (E. Chenikalova); *Belgorod Prov.*: Borisovka, 8.VIII 1958, 1 ♀ (Y. Wu); **Kursk Prov.*: Borisovka, 16.VI 1907, 1 ♂; 22.VIII 1916, 1 ♀ (SM); Kursk, 4.V 1903, 1 ♀ (SM); **Ryazan Prov.*: Gremyachka, 10.VII 1892, 3 ♂ (A. Semenov); **Nizhegorodskaya Prov.*: Vorotynskii Distr., Vasil'sursk, 28.V 2006, 2 ♀ (MM).

PUBLISHED RECORDS. Warncke, 1981: 303 (map) (Belgorod Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Moscow Prov. and east to Nizhegorodskaya Prov.), Europe (north to Czech Republic and Ukraine), Caucasus, Turkey, Morocco.

Sphecodes puncticeps Thomson, 1870

Sphecodes puncticeps Thomson, 1870: 99, ♀, ♂ (type locality: Sweden).

SPECIMENS EXAMINED. 26 ♀, 46 ♂. **Russia.** **Crimea Rep.*: Kerch; Sudak; Urozhainoe; **Krasnodar Terr.*: Gelendzhik; Sochi; **Astrakhan Prov.*: Liman; **Kalmykia Rep.*: 30 km SSW Ergenskii; *Rostov Prov.*: Bagaevskii; *Volgograd Prov.*: Kamyshin; Sarepta[=Volgograd]; Tinguta; Uryupinsk; **Belgorod Prov.*: Borisovka; **Kursk Prov.*: Borisovka; **Yaroslavl Prov.*: Berditsino; Filino; Yaroslavl; *Moscow Prov.*: 19 km S Bronnitsy; Zvenigorod; **Leningradskaya Prov.*: Luga; St. Petersburg.

PUBLISHED RECORDS. Meyer, 1925: 8 (Tatarstan Rep.); Blagoveshchenskaya, 1970: 214 (Middle Volda Reg.); Pesenko, 1972: 294 (Rostov Prov.); Sitdikov, 1986: 104 (Udmurtia Rep.); Warncke, 1992: 41 (map) (Rostov Prov., Volgograd Prov., Tatarstan Rep.); Kuznetsova, 2009: 54 (Lipetsk Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Leningradskaya Prov. and east to Far East), Europe (north to Finland and Sweden), Caucasus, Turkey, Israel, Central Asia, Mongolia, North Africa.

***Sphecodes reticulatus* Thomson, 1870**

Sphecodes reticulatus Thomson, 1870: 98, ♀, ♂ (type locality: Sweden).

SPECIMENS EXAMINED. 33 ♀, 10 ♂. **Russia.** *Crimea Rep.: Simferopol; *Krasnodar Terr.: Lazarevskoe, Sochi; *Stavropol Prov.: Stavropol; *Volgograd Prov.: Sarepta[=Volgograd]; *Kursk Prov.: Borisovka; *Chuvash Rep.: Morgaushskii Distr., Kubasy; Kirov Prov.: Stolbovo; *Yaroslavl Prov.: Yaroslavl; Berditsino; Filino; *Kostroma Prov.: Baidarki; Moscow Prov.: Khot'kovo; Perkushkovo; Zvenigorod; *Tver Prov.: Nelyushka; *Pskov Prov.: Troikino; *Leningradskaya Prov.: Gorskaya; Luga; Lopukhinka; St. Petersburg.; *Orenburg Prov.: Orenburg; Spassk.

PUBLISHED RECORDS. Blagoveshchenskaya, 1970: 214 (Middle Volga Reg.); Pesenko, 1972: 293 (Rostov Prov.); Sittikov, 1986: 104 (Udmurtia Rep.); Warncke, 1992: 47 (map) (Tatarstan Rep.); Anan'eva & Kochetkov, 1999: 8 (Ryazan Prov.); Kuznetsova, 2009: 54 (Lipetsk Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Leningradskaya Prov. and east to Irkutsk Prov.), Europe (north to 62°), Caucasus, Turkey, Central Asia.

***Sphecodes rubicundus* Hagens, 1875**

Sphecodes rubicundus Hagens, 1875: 318, ♀, ♂ (type locality: NW Germany).

SPECIMENS EXAMINED. **Russia.** *Stavropol Terr.: 30 km SE Stavropol, 19.VI 1999, 1 ♀ (E. Chenikalova); *Rostov Prov.: Kovrino-2, 145 km E Rostov on Don, 25.V 1967, 12 ♀, 1 ♂ (YP); *Volgograd Prov.: Tinguta, 10.V 1952, 1 ♀ (GV) [ZMMU].

PUBLISHED RECORDS. Warncke, 1992: 43 (map) (as *S. ruficrus* ssp. *rubicundus*, Saratov Prov.).

DISTRIBUTION. Russia (Stavropol Terr., Rostov Prov., Volgograd Prov., Saratov Prov.), Europe (north to 56°), Caucasus, Turkey, North Africa.

REMARK. The record of *S. rubicundus* from Udmurtia Rep. (Sittikov, 1986: 104) is wrong and belongs to *S. pellucidus*. The record of *S. rubicundus* from Komi Rep. (Sedykh, 1974: 159) doubtful and requires checking.

***Sphecodes rufiventris* (Panzer, 1798)**

Tiphia rufiventris Panzer, 1798: 4, ♀ (type locality: Germany).

SPECIMENS EXAMINED. 38 ♀, 45 ♂. **Russia.** *Crimea Rep.: Saki, Karadag; *Severnaya Osetia Rep.: Alagir; *Kabardino-Balkarskaya Rep.: Baskan; *Krasnodar Prov.: Lazarevskoe; Krasnaya Polyana; *Stavropol Terr.: Stavropol; Rostov Prov.:

Bagaevskii; Persiyanovka; *Volgograd Prov.: Sarepta[=Volgograd]; Kamyshin; Saratov Prov.: Vol'sk; Pugachev; *Penza Prov.: Ryamzai; Voskresenovka; Baika; Bikmurzino; *Belgorod Prov.: Borisovka; *Kursk Prov.: Graivoron; Borisovka; Kursk; *Ryazan Prov.: Gremyachka; Udmurtia Rep.: Siva River; Izhevsk; Pugachevo; Kirov Prov.: Vyatskie Polyany; Moscow Prov.: 14 km W Shatur; Orenburg Prov.: Belye Kluchi; Orenburg; Orsk; Kondurovka; Spassk; *Bashkortostan Rep.: Birsk; *Perm Terr.: Ust-Kishert.

PUBLISHED RECORDS. Eversmann, 1856: 48 (as *Dichroa analis* Illiger, Orenburg Prov., Saratov Prov., Ul'yanovsk Prov., Tatarstan Rep.); Blagoveshchenskaya, 1970: 214 (as *S. subovalis* Schenck, Middle Volda Reg.); Pesenko, 1972: 293 (Rostov Prov.); Situdikov, 1986: 105 (Udmurtia Rep.); Warncke, 1992: 49 (map) (Rostov Prov., Samara Prov.); Kuznetsova, 2009: 55 (Lipetsk Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. Russia (north to Kirov Prov. and east to Khakassia Rep.), Europe (north to 57°), Caucasus, Turkey, Central Asia, North Africa.

Sphecodes scabricollis Wesmael, 1835

Sphecodes scabricollis Wesmael, 1835: 429, ♂ (type locality: Belgium).

SPECIMENS EXAMINED. **Russia.** *Crimea Rep.: Simferopol, 30.V 1898, 1 ♀ (Kokuev); *Rostov Prov.: Rostov on Don, 25.VII 1974, 1 ♂ (YP); *Mordovia Rep.: Mordovskii Nature Reserve, 19.VI 2013, 1 ♀ (L. Egorov); *Yaroslavl Prov.: Berditsino, 6.VI 1926, 1 ♀ (A. Yakovlev); Yaroslavl, no date, 2 ♂ (S. Pashchenko); Moscow Prov.: Klin, 22.VIII 2007, 1 ♂ (T. Levchenko); *Smolensk Prov.: "Smolenskoe poozer'e" Nature Reserve, 7.VII 1991, 1 ♂ (V. Zlobin); Leningradskaya Prov.: Gorskaya, 15.VII 1928, 1 ♂ (Birulya); Siverskaya, 2.VII 1898, 1 ♀ (Kuznetsov); Tolmachevo, 5.VIII 1961, 1 ♂ (V. Rudolf); *Orenburg Prov.: Spassk, 2 ♂ (coll. Eversmann).

PUBLISHED RECORDS. Warncke, 1992: 46 (map) (Leningradskaya Prov.); Levchenko & Yuferev, 2013: 105 (Kirov Prov.); Levchenko, 2014: 32 (Moscow Prov.).

DISTRIBUTION. This species is rare, but widespread in Palaearctic. Russia (north to Leningradskaya Prov. and east to Far East), Europe (north to S England and Latvia, Caucasus Turkey, Japan, Sout Korea).

Sphecodes schenckii Hagens, 1882

Sphecodes schenckii Hagens, 1882: 217, ♀, ♂ (type locality: S France).

SPECIMENS EXAMINED. **Russia.** Crimea Rep.: Sevastopol, V-VIII 1913, 1914, 2 ♀, 5 ♂ (V. Pliginsky); 7. IX 1958, 2 ♂ (L. Zimina) [ZMMU]; Belbek, 11.VII 1897, 6 ♂; Alupka, 8-10.VI 1899, 1 ♂ (N. Kuznetsov); *Stavropol Terr.: Zhelezноводск, 13.IX 1976, 1 ♀ (E. Narchuk); Stavropol, Botsad, 28.VIII 1995, 1 ♀ (E. Chenikalova); *Adygea Rep.: Shuntuk, 3.VII 1935, 1 ♀, 7 ♂ (Petrukhina); *Krasnodar Terr.: Sochi, Okhun, 27.IX 1926, 4 ♂ (A. Shestakov); Goryachii Kluch distr., Suzdalskaya, 15.VIII 2011, 1 ♀ (Yu. Astafurova); Gelendzhik, 9.V 1975, 1 ♀ (VT).

PUBLISHED RECORDS. Pesenko, 1972: 294 (Rostov Prov.); Warncke, 1992: 48 (map) (Crimea Rep., Rostov Prov.); Proshchalykin & Astafurova, 2012: 97 (Crimea Rep.).

DISTRIBUTION. Russia (Crimea Rep., Stavropol Terr., Adygea Rep., Krasnodar Terr., Rostov Prov.), Europe (north to Germany), Caucasus, Turkey, Iran, Israel.

***Sphecodes spinulosus* Hagens, 1875**

Sphecodes spinulosus Hagens, 1875: 317, ♂ (type locality: NW Germany).

SPECIMENS EXAMINED. **Russia.** *Crimea Rep.: Simferopol, 4.VII 1893, 1 ♀, 1 ♂ (Kokuev); Zolotoe, 4.VII 1999, 1 ♀; Chauda, 9-10.V 1997, 2 ♀ (SI) [CFUS]; Gvardeyskoe, 8.V 2004, 1 ♂ (A. Fateryga); *Rostov Prov.: Persiyanovka, 8.VI 1971, 1 ♂ (YP); Bagaevskii, 10.V, 8.VI 1970, 2 ♂ (YP); Rostov on Don, 23.V, 1.VI 1967, 2 ♂ (YP); *Volgograd Prov.: Kamyshin, 25.V 1951, 1 ♂ (D. Panfilov) [ZMMU]; *Saratov Prov.: Nikolaevsk[=Pugachev] distr., V 1916, 5 ♂ (Wolmann); *Kursk Prov.: Kursk, 22.V-15.VI 1936, 1937, 1 ♀, 13 ♂ [ZMMU]; Orenburg Prov.: Spassk, 3 ♂, 1 ♀ (coll. Eversmann).

PUBLISHED RECORDS. Meyer, 1922: 167 (Orenburg Prov.; Ural); Warncke, 1992: 45 (Orenburg Prov.).

DISTRIBUTION. Russia (north to Kursk Prov. and east to Altai Terr.), Europe (north to 56°), Caucasus, Turkey, Central Asia, North Africa.

Removed species from Russian fauna

***Sphecodes marginatus* Hagens, 1882**

Sphecodes marginatus Hagens, 1882: 223

DISTRIBUTION. North Africa, Europe (north to Denmark and Northern Germany and east to Belarus).

REMARK. The record of this species from Ukraine and Russia (Warncke, 1992; Proshchalykin & Astafurova, 2012) is wrong and belongs to *S. nomioidis* (see Bogusch & Straka, 2012: 13). The record of *S. marginatus* from Udmurtia Rep. (Siddikov, 1986) is wrong and belongs to *S. rufiventris*. The specimen from Sochi [Okhun, 27.IX.1926, 1 ♂ (A. Shestakov), ZISP] determinated as *S. marginatus* by Blüthgen (see Levchenko, 2014: 36) belongs *S. croaticus*. The record of *S. marginatus* from Lipetsk Prov. (Kuznetsova, 1990) is doubtful and presumably belongs to *S. miniatus* or *S. nomioidis*.

***Sphecodes zangherii* Noskiewicz, 1931**

Sphecodes zangherii Noskiewicz, 1931: 139-145, ♀, ♂ (type locality: N Italy).

DISTRIBUTION. Central Europe (from France to Turkey and north to Germany and Czech Republic).

REMARK. The record of this species from Ukraine and Russia (Warncke, 1992; Proshchalykin & Astafurova, 2012) is wrong and belongs to *S. croaticus* (see Bogusch & Straka, 2012: 18).

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REFERENCES

Anan'yeva, S.I. & Kochetkov, S.I. 1999. The fauna of Hymenoptera Aculeata in the Ryazan province. In: Anan'yeva, S.I. (Ed.). *The fauna and ecology of animals. A collection of scientific reports of the Zoological society of the Ryazan state pedagogical university*. Ryazan: Ryazan Regional Institute for Education Development, 4-12. [In Russian].

Ascher, J.S. & Pickering, J. 2016. Discover Life bee species guide and world checklist (Hymenoptera: Apoidea: Anthophila). Available from: http://www.discoverlife.org/mp/20q?guide=Apoidea_species (accessed 5 September 2016)

Astafurova, Yu.V. & Proshchalykin, M.Yu. 2014. The bees of the genus *Sphecodes* Latreille 1804 of the Russian Far East, with key to species (Hymenoptera: Apoidea: Halictidae). *Zootaxa*, 3887(5): 501–528. DOI: <http://dx.doi.org/10.11646/zootaxa.3887.5.1>

Astafurova, Yu.V. & Proshchalykin, M.Yu. 2015a. New and little known bees of the genus *Sphecodes* Latreille (Hymenoptera: Halictidae) from Mongolia. *Far Eastern Entomologist*, 289: 1–9.

Astafurova, Yu.V. & Proshchalykin, M.Yu. 2015b. Bees of the genus *Sphecodes* Latreille 1804 of Siberia, with a key to species (Hymenoptera: Apoidea: Halictidae). *Zootaxa*, 4052(1): 65–95. DOI: <http://dx.doi.org/10.11646/zootaxa.4052.1.3>

Astafurova, Yu.V. & Proshchalykin, M.Yu. 2015c. The bees of the genus *Sphecodes* Latreille, 1804 (Hymenoptera: Halictidae) of the Eastern Palaearctic Region. *Proceedings of the Russian Entomological Society*, 86(2): 17–21. [In Russian].

Astafurova, Yu.V. & Proshchalykin, M.Yu. 2016. To the knowledge of the genus *Sphecodes* Latreille (Hymenoptera: Halictidae) of Caucasus. *Euroasian entomological journal*, 5 (Suppl. 1): 15–19.

Blagoveshchenskaya, N.N. 1970. Results of the study of solitary bees in the Middle Volga basin. In: Popov, V.A. (Ed.). *The resulting scientific conference of zoologists of the Volgo-Kama region. Proceedings*. Kazan: Ministry of the Higher and Middle Special Education of the USSR, 212–217. [In Russian].

Blüthgen, P. 1923. Beiträge zur Systematik der Bienengattung *Sphecodes* Latr. *Deutsche Entomologische Zeitschrift*, 1923: 441–514.

Blüthgen, P. 1924. Beiträge zur Systematik der Bienengattung *Sphecodes* Latr. II. *Deutsche entomologische Zeitschrift*, 1924: 457–516.

Blüthgen, P. 1934. Die Wirte der Paläarktischen *Sphecodes*-Arten. *Zeitschrift Wissenschaftlicher Insekten-Biologie*, 27(3/4): 33–42; (5/6): 61–66.

Bogusch, P. & Straka, J. 2012. Review and identification of the cuckoo bees of central Europe (Hymenoptera: Halictidae: *Sphecodes*). *Zootaxa*, 3311: 1–41.

Chenikalova, E.V. 2005. *Wild bees of the Stavropol Province and their attractiveness and conservation in agricultural landscapes: monograph*. Stavropol: AGRUS, 112 pp. [In Russian].

Eversmann, E. 1852. Fauna Hymenopterologica Volgo-Uralensis. *Bulletin de la Imperiale Society d'Naturalistes de Moscou*, 25(2): 3–137.

Fabricius, J.C. 1793. *Entomologia systematica emendata et aucta, secundum classes, ordines, genera, species adjectis synonymis, locis, observationibus, descriptionibus. T. 2.* Hafniae, Proft, viii + 519 pp. DOI: <http://dx.doi.org/10.5962/bhl.title.36532>

Hagens, J. von. 1874. Über die Genitalien der männlichen Bienen, besonders der Gattung *Sphecodes*. *Deutsche Entomologische Zeitschrift*, 18, 25–43. DOI: <http://dx.doi.org/10.1002/mmnd.18740180106>

Hagens, J. von. 1875. Weitere Beiträge zur Kenntniss der deutschen *Sphecodes*-Arten. *Deutsche Entomologische Zeitschrift*, 19(2): 315–319. DOI: <http://dx.doi.org/10.1002/mmnd.48018820115>

Hagens, J. von. 1882. Über die männlichen Genitalien der Bienen-Gattung *Sphecodes*. *Deutsche Entomologische Zeitschrift*, 26: 209–228, pls. VI, VII.

Kirby, W. 1802. *Monographia Apum Angliae*. Vol. 2, J. Raw, Ipswich, 387 pp.

Kuznetsova, V.T. 2009. *The bees of the Lipetsk Province. A cadastre of species*. Voronezh: IPTS VGU, 120 pp. [In Russian].

Lepeletier de Saint Fargeau, A.L.M. & Audinet-Serville, J.G. 1825. [Articles]. In: Latreille, P.A. (Ed.). *Encyclopédie méthodique ou par ordre des matières. Histoire naturelle. Entomologie, ou histoire naturelle des crustacés, des arachnides et des insectes. Tome Dixième*. Paris: Veuve Agasse, 1–832.

Levchenko, T.V. 2014. Contributions to the fauna of bees (Hymenoptera, Apoidea) of Moscow Province. 5. Family Halictidae (excluding *Lasioglossum* s. l.). *Eversmannia*, 40: 18–40. [In Russian].

Levchenko, T.V. & Yuferev, G.I. 2013. Additions and corrections to the checklist of bees (Hymenoptera: Apoidea: Apoformes) of the Kirov Province. *Trudy Gosudarstvennogo prirodnoy zapovednika "Nurgush"*, 2: 99–108. [In Russian].

Linnaeus, C. 1758. *Systema naturae per regna tria naturae secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis*. T. I. Editio X. Holmiae. 823 pp.

Linné, C. 1767. *Systema Naturae. Editio 12*. Laur. Salvii, Holmiae, 1327 pp.

Lykov, V.A. 2001. To the bee fauna material (Hymenoptera, Apoidea: Halictidae) of the Perm region. *Vestnik Permskogo universiteta. Biologia*, 4: 123–127. [In Russian].

Malyshev, S. I. 1927. Lebensgeschichte des *Colletes cunicularius* L. *Zeitschrift für Morphologie und Ökologie der Tiere*, 9(3/4): 390–409.

Meyer, R. 1922. Nachtrag I zur Bienengattung *Sphecodes* Latr. *Archiv für Naturgeschichte*, 88A(8): 165–174.

Meyer, R. 1925["1924"]. Zur Bienengattung *Sphecodes*. *Archiv für Naturgeschichte*, 90A (12): 1–12.

Morawitz, F. 1869. Die Bienen des Gouvernements von St. Petersburg. *Horae Societatis Entomologicae Rossicae*, 6(2): 27–71.

Morawitz, F. 1874. Die Bienen Daghestans. *Horae Societatis Entomologicae Rossicae*, 10(2/4): 129–189.

Nikiforuk, K.S. 1957. Bees of the Bashkir ASSR. *Zapiski Bashkirskogo Filiala Geographicheskogo Obshchestva SSSR*, 1: 139–162. [In Russian].

Noskiewicz, J. 1931. *Sphecodes zangeri* n. sp. (Hymenoptera, Apidae). *Annales Musei Zoologiczi Polonici*, 9: 139–145.

Osten-Saken, R. 1858. *An essay of the current knowledge state of the insect fauna in the environs of St. Petersburg*. St. Petersburg: Imperial Academy of Sciences. 166 pp. [In Russian].

Osytschnjuk, A.Z., Panfilov, D.V. & Ponomareva, A.A. 1978. Superfamily Apoidea. In: Medvedev, G.S. (Ed.). *Key to the Insects of the European Part of the USSR. Vol. III. Hymenoptera. Pt 1*. Leningrad: Nauka, 279–519. [In Russian].

Özbek, H., Bogusch, P. & Straka, J. 2015. A contribution to the kleptoparasitic bees of Turkey: Part I, the genus *Sphecodes* Latreille (Hymenoptera: Halictidae). *Turkish Journal of Zoology*, 39: 1095–1109.

Panzer, G.W.F. 1798. *Fauna insectorum germanicae initia, oder Deutschlands Insecten*. Heft 54. Felssecker, Nürnberg, 24 pp + 24 plates.

Pérez, J. 1903. Espèces nouvelles de Mellifères (paléarctiques). *Procés-verbaux de la Société Linnéenne de Bordeaux*, 58, 78–93, 208–236.

Pesenko, Yu.A. 1972. Contributions to the fauna and ecology of bees (Hymenoptera, Apoidea) in steppes of the Lower Don basin. Report II. The family Halictidae. *Entomologicheskoe obozrenie*, 51(2): 282–295. [In Russian].

Pesenko, Yu.A. 1979. A new species of cleptoparasitic bees of the genus *Sphecodes* Latr. from a nest of *Nomioides minutissimus* (Rossi) (Hymenoptera, Halictidae). *Entomologicheskoe obozrenie*, 58(4): 860. [In Russian].

Proshchalykin, M.Yu. & Astafurova, Yu.V. 2012. Halictid bees (Hymenoptera, Apoidea: Halictidae) of Ukraine: fauna and zonal distribution. *A.I. Kurentsov's Annual Memorial Meetings*, 23: 93–113. [In Russian].

Proshchalykin, M.Yu. & Astafurova, Yu.V. 2016. The species-group names of bees (Hymenoptera: Apoidea, Apiformes) described from Crimea, North Caucasus, European part of Russia and Ural. Part I. Families Colletidae and Halictidae. *Far Eastern Entomologist*, 312: 1–20.

Ruchin, A.B. & Shibaev, S.V. 2008. Contributions to the study of bees (Hymenoptera, Apoidea) in Mordovia. In: Ivanov, E.S. (Ed.). *Sovremennaya ekologia – nauka XXI veka. Ryazan'*: RGU, 335–341. [In Russian].

Sedykh, K.F. 1974. *The animal world of the Komi ASSR. Invertebrates*. Syktyvkar: Book Publishing House of the Komi Republic 191 pp. [In Russian].

Shibaev, S.B. & Polumordvinov, O.A. 2012. A review of species diversity of hymenoptera (Insecta, Hymenoptera) in Penza region. *Izvestiya Penzenskogo gosudarstvennogo pedagogicheskogo universiteta imeni V.G. Belinskogo*, 29: 274–279. [In Russian].

Sitdikov, A.A. 1986. The fauna of bees (Hymenoptera, Apoidea) of Udmurtia, with description of *Melitta udmurtica* sp. n. *Trudy Zoologicheskogo Instituta Akademii Nauk SSSR*, 159: 103–112. [In Russian].

Smith, F. 1845. Descriptions of the British species of bees belonging to the genus *Sphecodes* of Latreille. *Zoologist*, 3, 1011–1015.

Smith, F. 1853. *Catalogue of Hymenopterous insects in the collection of the British Museum. Andrenidae and Apidae. Vol. 1*. London, 197 pp., Taf. 1–6. DOI: <http://dx.doi.org/10.5962/bhl.title.20858>

Thomson, C.G. 1870. *Opuscula entomologica*. Vol. 2. Lund, Håkan Ohlson, 83–304 pp.

Warncke, K. 1981. Die Bienen des Klagenfurter Beckens (Hymenoptera, Apidae). *Carinthia II*, 179(91): 275–348.

Warncke, K. 1992. Die westpaläarktischen Arten der Bienengattung *Sphecodes* Latr. *Bericht der Naturforschende Gesellschaft Augsburg*, 52: 9–64.

Wesmael, C. 1835. Observations sur les espèces du genre *Sphécodes*. *Bulletin et Annales de la Société Royale d'Entomologie de Belgique*, 2 : 279–287.